UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,296	12/23/2003	Hyeoun-Joo So	P-0611	7851

34610   7590   04/12/2006

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER
RAMOS FELICIANO, ELISEO

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/743,296	SO, HYEOUN-JOO
	Examiner	Art Unit
	Eliseo Ramos-Feliciano	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2006*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22-24* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20 and 22-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

Art Unit – Notice

1.   The Art Unit location of your application in the USPTO has changed. To aid in

correlating any papers for this application, all further correspondence regarding this application

should be directed to Art Unit 2617.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   **Claims 1-6, 8-12, 15-19, and 21-22** are rejected under 35 U.S.C. 102(b) as being

anticipated by Krishnan (US Patent Application Publication Number 2002/0168976 A1).

Regarding **claim 1**, Krishnan discloses a frequency searching method comprising:

receiving system information from a network (the system information is received in form

of static table 110, which is transferred from a base station to the device 100 – page 3, paragraph

0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup

table – paragraph 0014);

obtaining a frequency (220) of each service vendor (e.g. "Airtouch" or "Sprint" –

paragraph 0009) from the received system information (system information/static table 110

includes usage frequency/block or channel number which is indicative of frequency of

transmission/usage frequency – paragraph 0010), each of the obtained frequencies corresponding

to a frequency band of use for respective service vendors (because SID and NID identify

respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the

system information/static table 110 <u>includes</u> SID and NID for respective frequency/channel

(220), as exhibited in Figure 3; therefore, each of the obtained frequencies correspond to a

frequency band of use for respective service vendors as claimed); and

searching the frequency (channel) of each service vendor based on the obtained

frequency of each service vendor (the location of device 100 may match multiple indices, with

multiple channels 220 correspondent to those; the channels are searched until a preferred system

connection is made – page 3, paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of

Krishnan).

Regarding **claim 2**, Krishnan discloses everything claimed as applied above (see *claim*

1). In addition, the system information (static table / roaming list / lookup table) is received by a

mobile communication terminal (device 100) from the network (base station) (paragraph 0027,

lines 32-38).

Regarding **claim 3**, Krishnan discloses everything claimed as applied above (see *claim*

1). In addition, searching the frequency (channel) comprises performing a cell search of

frequencies of a service vendor (the channels are searched until a preferred system connection is

made – paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of Krishnan).

Regarding **claim 4**, Krishnan discloses everything claimed as applied above (see *claim*

1). In addition, storing the frequency of each service vendor in memory (108) of user equipment

(paragraph 0027, lines 6-8).

Regarding **claim 5**, Krishnan discloses everything claimed as applied above (see *claim*

1). In addition, receiving the system information comprises receiving the system information in a

system information block (the explained table is a system information block – paragraph 0027,

lines 32-38).

Regarding **claim 6**, Krishnan discloses everything claimed as applied above (see *claim 5*). In addition, transmitting the system information block including the frequency of each service vendor (e.g. "Airtouch" or "Sprint" – paragraph 0009).

Regarding **claim 8**, Krishnan discloses everything claimed as applied above (see *claim 1*). In addition, performing a cell search by frequency bands when a requested frequency is not found when searching frequencies (the channels are searched until a preferred system connection is made – page 3, paragraph 0028, lines 19-25; therefore, if no system connection is made, that is, if frequency/channel is not found "another cell search" takes place until a preferred system connection is made).

Regarding **claim 9**, Krishnan discloses everything claimed as applied above (see *claim 1*). In addition, updating stored frequencies based on the received system information from the network (paragraph 0027, lines 32-38).

Regarding **claim 10**, Krishnan discloses a frequency searching method comprising:

receiving frequency data (220, included in system information or static table 110) of a plurality of service vendors (e.g. "Airtouch" or "Sprint" – paragraph 0009) from a network (the system information is received in form of static table 110, which is transferred from a base station to the device 100 – page 3, paragraph 0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup table – paragraph 0014) (system information/static table 110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency – paragraph 0010), the received frequency data relating to frequency bands of use for each of the service vendors (because SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/channel (220), as

exhibited in Figure 3; therefore, each of the received frequency data relates to frequency bands of

use for each of the service vendors as claimed);

storing the received usage frequency data in user equipment (stored in memory 108 of

device 100 – paragraph 0027);

performing a cell search of a stored frequency (channel) of at least one service vendor in

a frequency search (the location of device 100 may match multiple indices, with multiple

channels 220 correspondent to those; the channels are searched until a preferred system

connection is made – page 3, paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of

Krishnan); and

performing another cell search by frequency bands when a frequency is not found in the

stored frequencies for at least another one of the service vendors (the channels are searched until

a preferred system connection is made – page 3, paragraph 0028, lines 19-25; therefore, if no

system connection is made, that is, if frequency/channel is not found "another cell search" takes

place until a preferred system connection is made).

Regarding **claim 11**, Krishnan discloses everything claimed as applied above (see *claim

10*). In addition, the user equipment (mobile communication device 100 – Figure 2) comprises a

mobile communication terminal (paragraph 0025).

Regarding **claim 12**, Krishnan discloses everything claimed as applied above (see *claim

10*). In addition, transmitting the frequency from the network using a system information block

(the explained table is a system information block – paragraph 0027, lines 32-38).

Regarding **claim 15**, Krishnan discloses everything claimed as applied above (see *claim

10*). In addition, updating stored frequencies based on received system information from the

network (paragraph 0027, lines 32-38).

Regarding **claim 16**, Krishnan discloses a mobile communication apparatus (device 100 –

Figure 2; paragraphs 0025-0027) comprising:

a receiving device (receiver 104 – Figure 2) to receive system information (the system

information is received in form of static table 110, which is transferred from a base station to the

device 100 – page 3, paragraph 0027, lines 32-38) (the system information or static table 110

includes roaming list and lookup table – paragraph 0014);

a memory (memory 108 – Figure 2) to store (paragraph 0027) frequency information

regarding service vendors (e.g. "Airtouch" or "Sprint" – paragraph 0009) (the SID and NID

identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009,

and the system information/static table 110 <u>includes</u> SID and NID for respective frequency/

channel (220), as exhibited in Figure 3; therefore, the received system information relates to

frequency bands of use for each of the service vendors); and

a processing device (processor 108 – Figure 2) to obtain a frequency of a particular

service vendor from the memory (paragraphs 0025-0027), wherein the processing device

performs a cell search based on frequency bands (channel) when searching the frequency

information stored in the memory, the cell search being based on the received system

information (the location of device 100 may match multiple indices, with multiple channels 220

correspondent to those; the channels are searched until a preferred system connection is made –

page 3, paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of Krishnan), the

processing device further performing another cell search when a frequency is not found in the

stored frequency information for a particular service vendor (the channels are searched until a

preferred system connection is made – page 3, paragraph 0028, lines 19-25; therefore, if no

system connection is made, that is, if frequency/channel is not found "another cell search" takes place until a preferred system connection is made).

In addition, the processing device performs a cell search based on frequency bands when searching the frequencies stored in the memory (the location of device 100 may match multiple indices, with multiple channels 220 correspondent to those; the channels are searched until a preferred system connection is made – page 3, paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of Krishnan).

Regarding **claim 17**, Krishnan discloses everything claimed as applied above (see *claim 16*). In addition, the system information comprises frequency information of service vendors (e.g. "Airtouch" or "Sprint" – paragraph 0009) (the SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/ channel (220), as exhibited in Figure 3; therefore, the received system information relates to frequency bands of use for each of the service vendors) (system information/static table 110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency – paragraph 0010).

Regarding **claim 18**, Krishnan discloses everything claimed as applied above (see *claim 16*). In addition, the processing device performs a cell search of frequencies of service vendors stored in the memory (the location of device 100 may match multiple indices, with multiple channels 220 correspondent to those; the channels are searched until a preferred system connection is made – page 3, paragraph 0028, lines 19-25; paragraph 0016 and claims 9, 27 of Krishnan).

Regarding **claim 19**, Krishnan discloses everything claimed as applied above (see *claim 16*). In addition, the receiving device receives the system information in a system information block (the explained table is a system information block – paragraph 0027, lines 32-38).

Regarding **claim 22**, Krishnan discloses everything claimed as applied above (see *claim 16*). In addition, the processing device updates stored frequencies in the memory based on received system information from the network (paragraph 0027, lines 32-38).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   **Claims 7, 13-14, 20 and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnan (US Patent Application Publication Number 2002/0168976 A1).

Regarding **claim 7**, Krishnan discloses everything claimed as applied above (see *claim 1*). However, Krishnan fails to particularly disclose that the system information is received from the network through a broadcast control channel.

Using a broadcast control channel to send system information is a technique well known in the art the Examiner takes Official Notice of this notion. This technique has the advantages of reduced system load, releasing resources, and increased capacity because in this way system signaling does not occupy traffic channels.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to enable Krishnan so that the system information is received from the

network through a broadcast control channel since this technique has the advantages of reduced

system load, releasing resources, and increased capacity because in this way system signaling

does not occupy traffic channels.

Regarding **claim 13**, Krishnan discloses everything claimed as applied above (see *claim*

12). However, Krishnan fails to particularly disclose that the system information is transmitted

through a broadcast control channel.

Using a broadcast control channel to send system information is a technique well known

in the art the Examiner takes Official Notice of this notion. This technique has the advantages of

reduced system load, releasing resources, and increased capacity because in this way system

signaling does not occupy traffic channels.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to enable Krishnan so that the system information is transmitted through

a broadcast control channel since this technique has the advantages of reduced system load,

releasing resources, and increased capacity because in this way system signaling does not occupy

traffic channels.

Regarding **claims 14 and 23-24**, Krishnan discloses everything claimed as applied above

(see *claims 1, 10 and 16*). However, Krishnan fails to particularly disclose that the network

comprises a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Nevertheless, Krishnan discloses IS-95 CDMA (paragraphs 0005, 0007). IS-95 CDMA is

CDMAone or CDMA-2000, the North American counterpart of European W-CDMA which is

the core of UMTS. Therefore, UMTS is just a particular requirement of a particular system;

therefore, obvious expedient of engineering design. For example, UMTS would be desirable in

European implementations.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to enable Krishnan's invention in UMTS because this would enable European implementations of the invention as explained above.

Regarding **claim 20**, Krishnan discloses everything claimed as applied above (see *claim 16*). However, Krishnan fails to particularly disclose that the system information is received from the network through a broadcast control channel.

Using a broadcast control channel to send system information is a technique well known in the art the Examiner takes Official Notice of this notion. This technique has the advantages of reduced system load, releasing resources, and increased capacity because in this way system signaling does not occupy traffic channels.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to enable Krishnan so that the system information is received from the network through a broadcast control channel since this technique has the advantages of reduced system load, releasing resources, and increased capacity because in this way system signaling does not occupy traffic channels.

Response to Arguments

6.   Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

7.   Even though arguments are moot as indicated above, for clarification of the record the following remarks are made.

8.   Applicant's arguments are substantially directed to the newly added limitations (pages 7-9 of the response).

In response, these limitations have now been treated on the merits and a detailed explanation is found hereinabove.

9.   With respect to claim 14, in response to Applicant's argument (page 9, last paragraph of the response) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teaching, suggestion, or motivation can be found in the knowledge generally available to one of ordinary skill in the art. For example, it is of common knowledge that IS-95 CDMA, as disclosed by Krishnan, as explained in previous Office action and repeated hereinabove, is CDMAone or CDMA-2000, the North American counterpart of European W-CDMA which is the core of UMTS. Therefore, UMTS is just a particular requirement of a particular system; therefore, obvious expedient of engineering design. For example, UMTS would be desirable in European implementations.

10.   With respect to claim 5, in response to Applicant's argument (page 10, first full paragraph of the response) requesting clarification with respect to the limitation "system information block", the examiner recognizes that the explained table is fairly characterized as a system information block as claimed – see paragraph 0027, lines 32-38 of Krishnan.

11.   With respect to claim 7, in response to Applicant's argument (page 10, last paragraph of the response) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to

produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teaching, suggestion, or motivation can be found in the knowledge generally available to one of ordinary skill in the art. For example, it is of common knowledge that using a broadcast control channel to send system information has the advantages of reduced system load, releasing resources, and increased capacity because in this way system signaling does not occupy traffic channels.

12.   Furthermore, with respect to claim 7, in response to Applicant's request for evidence regarding Examiner's taking Official Notice, Applicant is directed to Maupin (US Patent Number 6,600,917), generally the whole document, specifically, for example, column 6, lines 20-25; also column 2, lines 64-67. Such passage teach using a broadcast control channel to send system information as argued and claimed in claim 7.

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

14.   Any inquiry concerning this communication from the examiner should be directed to
Eliseo Ramos-Feliciano whose telephone number is 571-272-7925. The examiner can normally
be reached from 8:00 a.m. to 5:30 p.m. on 5-4/9 1st Friday Off.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Marsha Banks-Harold, can be reached on (571) 272-7905. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.
        Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELISEO RAMOS-FELICIANO
PRIMARY EXAMINER

ERF/erf
April 8, 2006